SPRING RIVER DAM 3

by

Jenny Underwood

Back Home Pubs has no intent of harm or defamation of character to any person, living or dead. Reference to historical events may or may not have been researched. The stories are printed as they are told. Some may be folk tales. Although the editorial staff made every effort to avoid errors and correct them, some were inescapable.

Published by Back Home Pubs
P.O. Box 766
Mammoth Spring, AR 72554
jennygoog@gmail.com
417-203-0005

Creative Commons Deed

This is a human-readable summary of the full license below:

You are free to share -- to copy, distribute and transmit the work, and to remix -- to adapt the work for any purpose, even commercially.

Under the following conditions:

- Attribution -- You must attribute the work in the manner specified by the author or licensor (but not in any way that suggests that they endorse you or your use of the work.)
- Share Alike -- If you alter, transform, or build upon this work, you may distribute the resulting work only under the same, similar or a compatable license.

With the understanding that:

- Waiver -- Any of the above conditions can be waived if you get permission from the copyright holder
- Other rights - In no way are any of the following rights affected by the license:
- Your fair dealing or fair use rights
- The author's moral rights

Rights of persons may either in the work itself or in how the work is used, such as publicity or private rights.

Notice -- For any resue or distribution, you must make clear to others the license terms of this work. The best way to do that is with a link to:
https://creativecommons.org/licenses/by-sa/3.0/

Books Published by Back Home Pubs (on Amazon)

Family & Children's books:

Destiny of the Mated Souls: Frank Charboneau (July 24, 2023)
Caregiving in the First Person for Kidney Patients (03-26-2016)
Courage and Comics (04-20-2019)
Collision Cooking (09-04-2017) Recipes and stories
Ghost Ship Rising: Kids Sailing West Coast (05-27-2017)
Princess of Umpapa: Eva Ford

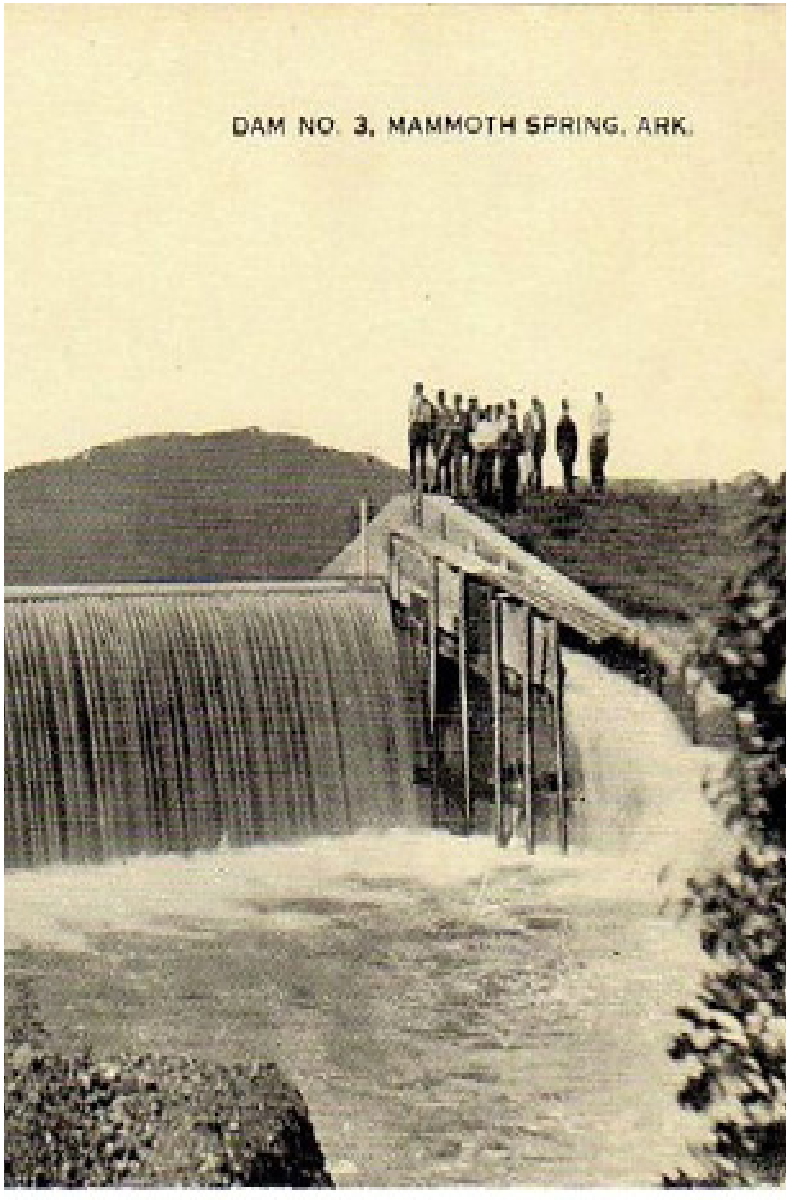
Oregon County MO & other History books

Barton Hill Tribe (12-01-2024)
The Startup of the Residence Center, MSU, West Plains, MO. (09-05-2023)
Railroad Ties (04 21, 2020)
Oregon County History: Trails to Springs, Caves, Geological Wonders and Camps. (04-30-2018)
OC History: Stories told at my Daddy's knees (04-22-2018)
OC History Train Wrecks and Plane Crashes (09-01-2017)
OC History the Eleven Point River, Ferries, Crossings, Mills (08-23-2016)
OC History: The Harpoles of Myrtle, Missouri (11-07-2016)
OC History: Memories of WW II (05-23-2016)
OC History: Thayer Class of 1963 (09-17-2016)
Historical Sketches of the Warm Fork Hill Country (08-28-2015)
OC History: The Irish Wilderness Yesterday and Today (04-28-2015)
OC History Book I: preserve Yesterday - Enrich Tomorrow (08-20-2014)
Oregon County Missouri History Short Version (06-10-2014)

Sci Fi Books by Michael Underwood

Marcus: Intergalactic Con Man (Sept. 2020 book 3 of a trilogy)
Shadow Killer and Front Runners (July 2020 book 3 of a trilogy)
Shadow Killer Dance with Death (Jun 10, 2017 book 2 of trilogy)
Shadow Killer (Aug 5, 2016 book 1 of trilogy)

DAM NO. 3, MAMMOTH SPRING, ARK.



Dam 3 Paradise

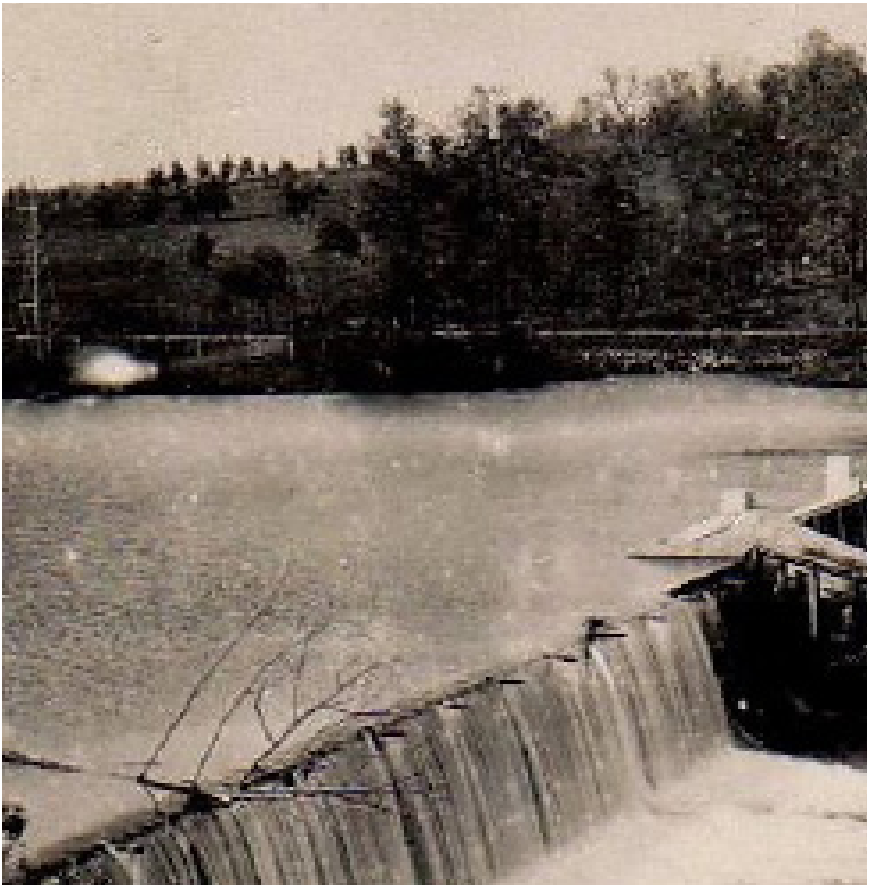
One of the World's Largest Springs fed by cave systems flows into Mammoth Spring via Dam 1 (Mammoth Spring) and Dam 3 (South 63) which powered electricity in the Thayer/Mammoth Spring area until the equipment started deteriorating and replacements weren't available. Dam 2 (one mile south of Dam 1) was 320 feet long and 12 feet high before it washed away. Dam 1 was 610 feet long and 24 feet high constructed from reinforced concrete. It had two pair of Leffel horizontal wheels connected to two 400 kilowatt Westinghouse Electric generators.

A National Natural Landmark, Mammoth Spring is one of the world's largest springs with nine million gallons of water flowing hourly. It forms a 10-acre lake then runs southward as the Spring River, a famous Ozark trout and float stream. Remnants of a mill and hydroelectric plant are part of Mammoth Spring's history. Dam 1 also provided power for the largest flour mill in Arkansas and a cotton gin.

While the Dams still stand, they have been repurposed. Dam 1 is a tourist attraction. Dam 3 is a trout fish hatchery.

The Spring River is a 57-mile long river that flows through the U.S. states of Missouri and Arkansas. It consists of two branches, the South Fork of the Spring River and the Spring River proper.

Wikipedia
The Spring River proper begins where Mammoth Spring and Warm Fork of the Spring River merge at Mammoth Spring State Park in Mammoth Spring, Arkansas.[8] Mammoth Spring is the outlet of an underground river that



runs from Missouri into Arkansas.[9] Over 9.78 million US gallons (37,000 m3) per hour flow out of the massive spring and forms the Spring River.[10] Being predominantly spring-fed with water averaging 58 °F (14 °C), the river is kept cool during warmer months and is suitable trout habitat for several miles.

Dam 3 was a fishing and swimming paradise. The dam was built in 1910 to produce hydropower and generated 70,000 gallons of spring water per minute at a temperature of 54 degrees in winter and 64 degrees in summer. It was originally christened Hilton as a compliment to A. Hilton, general passenger agent of the Frisco Railroad. It's impressive that the dam could generate so much hydropower and spring water after more than a century.

The Story

My friend, Miss Janice (Turner Woods) lived with her family right across the railroad track from Dam 3. Living in a rock house provided by Arkansas Power and Light was a unique and memorable experience. Janice and I spent a lot of time exploring the surrounding area and enjoying the natural beauty of Dam 3. It was a great place for fishing and swimming.

Janice's Dad, Frank Turner worked at Dam 3 to keep the hydroelectric plant running smoothly. Frank worked the night shift and was always sleepy. But not too sleepy to go fishing in the daytime. He had a couple of boats that he would take out or just fish off the Dam. He probably fished during the night too as fishing was his passion.

During the day, Doyle Bonds was the caretaker and lived next door with his family including Sandy (his son). Having

a sense of community and family support was very beneficial for both caretakers and workers like Frank and Doyle.

My Dad, Shot Underwood loved fishing as much as Frank did. But he worked on the railroad and was gone to Memphis most of the week which limited his fishing. Also, he worked an erratic schedule both night and day. He had a passion for fishing, but his work on the railroad prevented him from being able to indulge in that hobby as much as he would have liked.

My Mom, Alice Underwood, and Janice's Mom, Evelyn Turner both worked at the Puritan Dress Factory (formerly Rice Stix) and were great friends. My Mom, Alice Jett Underwood, was a master seamstress and had worked in a garment factory in Illinois. She was one of the first sixteen hired to work for Puritan fashions from 1953 until 1963. Thayer School had just opened a new section for first through third grades and offered their gymnasium until the building was complete. I was too short to see in the window but I knew my Mom was in there. So during breaks, I would go to the window and jump up and down to see her. I was so excited that she was at school.

She was excited to have a job. She was the primary support for three kids and eventually sent two to college.

The dress factory profoundly impacted the local economy. Now, women could work and that wage meant a difference in poverty to many families. The women were hard-working and quick to learn.

My brothers, Babe and Larry, were friends with Bobby and Jerry Turner. Also, Don and Robbie Smith came often.

Janice had two sisters, Judy and Tricia (Patricia) who played and swam with us. So the family set the stage for a magical place to visit and have loads of fun.

When I was very young I had an imaginary playmate who I named Miss Janice. I told my grandpa Pappy stories about what we were doing and where we went. He would laugh and pretend to believe me. When our mothers were friends, I met the real Miss Janice and thought it was a miracle.

The place was so special, like having your own water park in your front yard. We would hang out and watch the boats go out fishing. There was a railroad track between the house and the dam and we would wave at the crew. Sometimes my Dad was in the front cab. He would probably wish he could go fishing instead of riding the train to Memphis.

We loved to swim more than anything. When I would come for the day (and maybe the night), we would beg to go swimming from morning 'til night. They would let us swim at least once. But if we got to swim twice, that was nirvana. We would dive off the backside of the dam in the water pooled where there were no openings for the water to go over the waterfalls. We were forbidden to swim past the area where water flowed through the spillways into the river below.

A scary incident taught me to swim there. We had an inner tube with a board over it and were in the shallow water. We eased the makeshift raft out and I climbed on top of it with kids holding the raft. My Dad and Frank saw it from their front porch and started running towards us, knowing what was about to happen. Sure enough, I fell in and started dog-paddling and grabbed onto the raft before they got there. They were happy and relieved that I didn't drown. I

was happy that I learned to swim and stay above water.

Our families always encouraged us to swim even though our Moms did not swim. My Mom would stand on the bank and worry, but she wanted us to know how to be safe in the water.

We would take Frank's boat up Spring River, not to fish, but to visit the YMCA camp at Trace Creek just past Cold Springs. Young boys from Memphis would come to camp there in summer. They had a nap time that lasted an hour or two. We would paddle up and swim off their dock during that time as we were

prohibited from using it while they were there.
Bobby Turner paddled a boat up the Spring River and discovered a branch that was strong enough to hang onto. There was a big rock at the top of the side of the river and they would go up on the rock and swing on the branch out into the river and let go. One time Sandy Bonds and Trichia went up but she wouldn't jump. Sandy swung and jumped and screamed the whole way down until he hit the river. He had seen a snake at the top!

We also explored the island below the Dam. We had to traverse the narrow top of the dam, always holding onto the wire so we didn't fall. We would go down to the island in the trees and sometimes take our clothes off and swim so our parents wouldn't know we had gone swimming. Sometimes we would camp there overnight. The water was swift and cold and we loved it.

There was a small island that protruded from the larger one. Janice and I decided to adopt the island. We made up a paper that deeded the island to us and Frank signed it. Even though it was not a legally binding document, we claimed the island as our own.

We started carrying stuff to the island which meant we had to walk across an area with waist-high water to get there. We made a little fire with a stove and cooked and ate. We were so excited to be kids who owned an island. Some years the island would flood so we didn't keep things there for long. It was amazing how even small adventures like this can create cherished memories and a sense of ownership and belonging.

We would have fish fries there and barbeques. We ate frog legs, squirrels, rabbits, possums, and turtles, most anything that moved. One time Frank barbequed a goat. Frank would

set up his barbeque on the front porch, put on the meat, and fall asleep as he was always lacking sleep from working overnight. Then when he woke up, the barbeque would be ready and delicious!

At one fish fry, Billy Barnett was singing the song, "Purple People Eaters," except he sang "Purple Peter Eaters." Frank had just taken a bite of fish and he laughed so hard he choked. He ran out the back screen door slamming it and went out back and spit out his food while still laughing.

Miss Janice and I would hang around the Dam even when we weren't allowed to go swimming. We would pretend we worked there and make papers. Frank would go along with

our nonsense.

We would watch the comings and goings of the fishermen. One day, we noticed a truck was still parked and nobody had claimed it. We told Frank about it and told him there was somebody still out there. He walked over the the island and sure enough, there was a guy who had too much to drink and was unable to get back across the ledge to the dam. So Frank and a couple of guys helped him stumble back out and drove him home.

There was a woman about 50 years ago who would come and fish every day off the narrow concrete walkway that was south of the Dam. One day some people knocked on the Turner's door and yelled there was a woman in trouble. They ran down across the dam and the woman was lying on the rocks where she had fell. She unfortunately was dead.

Alice Underwood, Euvonne Goodrich, and Opal Lindley were often visitors at Dam 3.
It was quite an adventure to go frogging and is still a tradition in the Turner Family. You get in a boat in the dark of night and go up the river. Then spot the frogs with the light and scoop them up in a gunny sack.

Going frogging was quite a sport in the Ozarks right up there with possum hunting except women usually had more sense than to go out all night chasing possum. if you happen to kill a possum, the thing was inedible and nobody wanted to cook it. But frogging was entirely different. First, it had to be done at night. The idea was to float down the river with gunnysacks, and headlights on a headband around your head to keep your hands free. You would flash the light at the frog on the shore blinding the frog then move the boat over to the side and pick the frog up and throw it in a gunny sack.

It wasn't easy to get four or five people coordinated to go the same direction and do what needed to be done.

I remember one famous frogging expedition when Mom, Evelyn, and Carol wanted to go frogging. Dad and Frank and the men were in their own boat on the other side of the river. None of the women could swim. They paddled under a branch and a snake fell onto the boat. Mom jumped out of the boat and the little snake ran from one end of the boat to the other while Carol and Evelyn tried to beat it to death with oars. Finally, they threw the snake over the side at which time Mom jumped back in the boat as she would rather be where the snake was not. When the women arrived they didn't even have one frog but the men had several.

Another Frogging adventure was when Pat (Turner) Welch had her husband to be go frogging with Janice to get to know her. Janice was so excited. She told him she had the boat and the light. So they paddled up the river. When they came back a couple of hours later they had a sackful of frogs. Pat's fiance said, "It was amazing. Janice sat in the front of the boat and would spot a frog on the side with her headlight and have me paddle over. She

would jump out of the boat and grab the frog by the back spine and throw it in the sack. They had a mess of frogs when they got back. And the two became friends over a frogging trip."

When the frog legs are cleaned the leaders have to be snapped so they don't jump around in the skillet when they are fried.

I think you can still order frog legs at the Riverbend Restaurant in Mammoth Spring, AR which is owned by Janice Turner Woods and her husband, Andy.

But we didn't eat crawdads as they were used for fish bait. I remember my Dad would go to the grocery store and buy

frozen shrimp to catch perch, catfish and goggle-eye when he was short of crawdads and worms. When I grew up and learned to love shrimp I thought that wasn't much of a trade.

We would catch crawdads in Two-Mile creek using a jar that had a way in but not out for the crawdads. We would put the jar behind them and step in front of them as they scampered backwards into the jar. Dad had a worm bed that he kept going as he always needed bait.

We didn't like carp fish and our Mom's didn't like cooking it. A little man driving a red truck would come and fish for all the carp he could catch. Evelyn went down and asked him how to cook it so it tasted good. He said he canned it. She asked how he did it and he explained it was done just like canned tuna. And he said it was better than tuna fish.

Now, most of the area below the dam on the far side has

been converted to pools where fish are farmed. The waterfalls are visible however in the near area as is the old station for Dam 3.

Frank's sons Jerry and Bobby worked at Dam 3 until it closed. They stopped creating hydroelectric energy at Dam 1 and Dam 3 when the equipment malfunctioned and were unable get the parts to fix them.

The dams created energy from the time they were built for the surrounding areas. Dam 1 was built in 1925 by Arkansas Power and Light and Dam 3 later on.

It would be wonderful if they still generated clean energy from the waterfalls to show the world how the movement of water can create energy as it still does on the big lakes and places like Hoover Dam.

From The Encyclopedia of Arkansas:
"Although Arkansas has the potential to produce a significant amount of its electrical energy from hydroelectricity, based on the nearly 1308.8-megawatt capacity, only three percent of Arkansas's electrical energy in 2006 was from hydroelectric sources. This compares to almost fifty percent from coal, almost one-third from nuclear, and almost twelve percent from natural gas sources. In 1990, more than nine percent of Arkansas's electrical energy was from hydroelectric sources. Peak generation from hydroelectric power occurred in 1985 at 4,434 million kilowatt hours (kWh), almost three times the 2006 amount of 1,551 million kWh. This decline is surprising, considering the increasing emphasis on renewable electrical energy sources and the existing hydroelectric infrastructure in Arkansas. Although the

development costs of a hydroelectric plant can be costly, once completed, maintenance and operation costs are low, there is no air pollution, and there is little concern over fluctuating fuel costs.

In the twenty-first century, three new dams were added to the White River, near Batesville (Independence County), Earnheart (Independence County), and Marcella (Stone County). The first two dams were built within one-hundred-year-old locks, while the third is a greenfield application with the powerhouse built opposite the lock because of the proximity of the railroad."

The conversion of Dam 3 into a Fish Hatchery:
https://www.agfc.com/en/explore-outdoors/hatcheries/hinkle-spring-river-state-fish-hatchery/
"The Jim Hinkle Spring River State Fish Hatchery is on a 7-acre island in the middle of the Spring River near Mammoth Spring in Fulton County. The hatchery is one of the largest state-owned trout-producing facilities in the southeastern United States and is the Arkansas Game and Fish Commission's only cold water facility. The hatchery was built in 1974 to raise rainbow trout for the table market. The Kroger Company donated the facility to the AGFC in 1985. Today the hatchery produces and stocks rainbow and cutthroat trout for Arkansas tailwater trout streams and spring creeks, and provides trout for the seasonal Family and Community Trout Fishing Program and the winter trout-stocking program in southern Arkansas."

The river below the dam is a popular place for fishing

as a parking lot has been helped. Also, canoe boats are launched from there in summer. There are some trout who probably escape from the facility above so fishing is good there. More than a million trout are stocked each year by the Jim Hinkle Spring River State Fish Hatchery staff across The Natural State. Fifty percent of all the rainbow trout stocked in Arkansas is raised in Mammoth Spring—that's

one million fish a year.

I haven't seen any swimming there as the entire area above Dam 3 has DO NOT TRESSPASS signs. The

area below the Dam looks to be accessible only by boat But I am so happy I got to swim and play in our water park while it was still just Dam 3.

Other Dams

Bull Shoals Dam

Bull Shoals Dam is a concrete gravity dam on the White River in northern Arkansas in the United States. The dam lies on the border of Marion and Baxter Counties, and

forms Bull Shoals Lake, which extends well northwest into Missouri. Its main purposes are hydroelectricity production and flood control.

The White River, before the Dam was built, was used as a major transportation route for Arkansas. Many people would pilot steamboats and other kinds of boats up and down the river rather than mess with the incomplete and extremely bad roads. Between 1915-1927 there were several major floods, each one more destructive than the last. The United States Corp of Engineers purposed the building of the Dam. After going through Congress and the President for approval the US Corp of Engineers started work on the Bull Shoals Dam in June of 1947 and was finished in July of 1951. After the Dam started retaining water, many homes, farms, and towns were flooded. One of the towns that was flooded was Kingdon Springs, the first town in northern Arkansas that had electricity. The lake disrupted many lives by destroying the farms that they worked. Pictures of the Dam during and after construction can be viewed at http://www.ozarkhistory.com/construction1.htm and http://www.ozarkhistory.com/construction2.htm.

After the Bull Shoals Dam was built the transportation route of northern Arkansas was cut in half. If someone wanted to head east by way of the White River they would have to stop at the Dam and go on foot or get a wagon to go out further east. The Dam also caused a major problem in the way of getting goods for areas north of the Dam. Some people would own two boats or would hire transportation for the trip to areas past the Dam. (http://www.ozarkhistory.com/damhist.htm).
The Dam covers 101,196 acres with a lake surface area of 71,240 acres.

The project power plant has an installed capacity of 340 megawatts and generates an average of 785,000 MWh annually. Bull Shoals has eight generators

Lake Norfork

In the late 1930s, before construction of the Norfork Dam had begun, the local economy of Baxter County, Arkansas was deteriorating. The yearly per capita income had fallen to between one-hundred and two-hundred dollars, and in 1940 alone more than six hundred small farms were abandoned. Those who remained looked forward with enthusiasm to any solution that promised relief from their economic problems. Mountain Home, Arkansas, then the largest community, was described as having no prospect for new business and very few paved roads. When construction of the dam finally began in the spring of 1941 it was said that, "before the first shovel of dirt was thrown, or the first tree dozed down, the Mountain Home people knew that a new era had dawned" United States, History of the Corps of Engineers. As the largest nearby community, Mountain Home was to derive the most spectacular benefit for the Corps projects in the area. Centrally located between both Norfork and Bull Shoals Dam, few of its citizens could foresee the economic change Norfork Dam would bring to the poor agricultural community (Messick).

Power generation was not originally included in the project purpose for Norfork Dam. However, this was unacceptable to the people of Baxter County and the surrounding region. The sparse population of the area did not justify investment,

by private companies, in a large network of power lines. It was believed that, if the dam did not include power generation, it could be many years before the region would gain service. Shortly after construction began Congress, under the threat of impending war, authorized construction of the power house and two out of the four generators for Norfork Dam.

The construction contracts for the dam were awarded to the Morrison-Knudsen company and the Utah Construction Company. Both companies had participated in the construction of the Grand Coulee Dam and Hoover Dam. Construction began in the spring of 1941 with the removal of 400,000 cubic yards (310,000 m3) of earth to expose the bedrock foundation and an additional 28,000 cubic yards (21,000 m3) had to be removed to stabilize it. This was accomplished using draglines and power shovels. Most of the smaller aggregate used in construction was removed from the sand and gravel bars of a twenty-mile (32 km) section of the White River. A quarry and crushing plant was required to create nearly 800,000 tons of larger aggregate.

The completion of the dam had an immediate effect; with freedom from the fear of floods many people began to reoccupy farms downstream of the dam. Ironically the areas most affected by seasonal flooding were those covered by the reservoir, and the dam had little effect on flooding of the White River. However, not everyone was happy with the construction of the dam, nearly four-hundred people had to be removed from one of the most heavily populated and prosperous regions of Baxter County to make room for the reservoir. The government only paid people for their land if they had structures on it, effectively stealing thousands of acres from rightful landowners. As a result, many people

did not get paid for their land when it was covered. In fact, one man who thought he had lake front property paid taxes on it until 2004 when he realized that his property was underwater (Andrewson).

Norfork Lake covers 22,000 acres (8,900 ha) with more than 550 miles (890 km) of shoreline. There are 19 recreational parks on the lake that provide places for camping, hiking, picnicking, swimming, boating, and water skiing. Commercial docks on Norfork Lake provide boats, motors, diving equipment, and guides to the lake.
Most of the lake lies within Baxter County, Arkansas, with its Northernmost portion in Ozark County, Missouri.
Bass, crappie, walleye, catfish, and bream are all found on the lake with almost all other varieties of fresh water game fish. Below the dam, North Fork River has a superb population of trout. The Norfork National Fish Hatchery maintains a continuous supply of trout.

The Dam ideas

For years, before the Eleven Point River was set aside as a Scenic and Wild River, the Corp of Engineers set their sights on building a dam near the Arkansas-Missouri border near Dalton, north of Pocahontas, AR. The dam was proposed in 1938 but the people of the area got it "cubby-holed." In 1952, the project was brought up again and this time a delegation from out on the river went to Washington and persuaded the Corp of Engineers to not build a dam. Then in July 1961, some businessmen at Pocahontas felt like the dam would help the economy and worked up new proposals to build a 30-mile long lake extending into

Oregon County. Attorney Pat Freeman represented a group of Thayer men who were for the proposal to build a high dam. About that same time, the West Plains Chamber of Commerce passed a resolution opposing the Water Valley Dam. But the contingent in Oregon County and people living along the river in opposition of the dam held public rallies and dug up facts about other lake projects that were negative and finally killed the project with the help of a couple of politicians.

Ozark National Scenic Riverways National Park

In 1933, large tracts of land were being purchased by the government to be put into the Clark National Forests. (today the Clark has been rolled into the Mark Twain system). The states could not manage the vast timberland and no one had money to pay taxes, let alone purchase the land. In 1936, the Missouri Department of Conservation was established in order to more rigidly enforce the game laws. (people had harvested most of the wildlife). It was also during the 1930s that the U. S. Army Corps of Engineers began studies for a dam on the Current River to produce hydroelectric power. In 1941 plans were coming together and had it not been for WW II, it is very likely the first of two or three dams would have been built. Following the war, plans to dam the river once again resurfaced but in the early 1950s an anti-dam movement became so strong, with articles and pictures against the dams being fostered by conservation writers with both St. Louis papers, that it finally stopped any further plans to dam up the Current River. Conservationists didn't stop and kept working to get a bill or some plan to protect the river. In 1956, the National Park

Service conducted a study and issued a report calling for the establishment of a corridor-type park along the Current and Jacks Fork Rivers. In 1960, Congress appropriated funds to do a feasibility study to develop an "Ozarks National Monument" which would include also the Eleven Point River. That brought about strong resistance by the residents and farmers who owned land along the river. The local politicians joined in with the local people because the counties would lose a good portion of their tax base, but in 1962, President John F. Kennedy endorsed the idea. Secretary of the Interior Stewart Udall and other officials went to the region and floated the Current River, after which he gave his endorsement. A bill was submitted to Congress to form the new park and it passed. President Johnson signed it into law and the Ozark National Scenic Riverways National Park had become a reality. A formal dedication ceremony was held at the Big Spring in 1972 with Patricia Nixon Cox cutting the ribbon.

The water at Big Spring flows into the Current River at the rate of 276,000,000 gallons a day. It's the largest of the huge springs in the Ozarks. The development of the trails and facilities go back to the CCC undertakings in 1933. There is, at times, a boat ride concession at the Spring but by all means, walk to the place where the water gushes out of a bluff and forms a swift river that flows into the Current River. It's simply one of the finest rivers in the country.

More History
The Arkansas Gazette August 2nd, 1891

Mammoth Spring, Arkansas

The greatest attraction of Mammoth Spring, and there are

many, is the great spring itself. There is not another one like it in the world. There are cold springs and hot springs, big springs and little springs, chalybeate springs and sulphur springs, mineral springs and alum springs. There are springs that gush from the mountains and springs that boil up from the valleys, and springs whose pure sparkling waters are a nector fit for the gods. But of all of them, Mammoth Springs is the greatest.

When the earth was in a formative state, terra incognito, before the valleys were drained with rivers and covered with forests, the hand of the Deity, the supreme architect of the universal, seems to have designed with special care the formulation of Mammoth Spring.

Imagine a river of water gushing from under a mountain, with an known subterranean source, and washing down the valleys for a distance of forty miles to its confluence with the Black River. This is Spring River, one of the greatest and prettiest streams in the U.S. It is not a dashing torrent tumbling over vast cascades nor a murky, slothful stream that drags its slew length along like a laggard driven to his unwilling task. The first seven miles of Spring River drops about 130 feet, the first mile being 25 feet. At as many as twenty places there are falls sufficient to operate the heaviest machinery without an artificial dam. It is estimated that the first seven miles of the river afford enough water power to operate all the machinery employed in running all the factories of New England! Is the utlization of Mammoth Spring water power are points of advantage that no other water power in the world can claim. The flow of water is uniform, not being subject to fluctuation by flood or drought. The temperature is almost the same winter or summer, 50

degrees Fahrenheit and freezing is unknown. The water is confined to a narrow channel and the construction of dams entails a comparatively trifling expense. The wateflow of the spring is 63,000 cubic feet per minute. The spring is seventy feet deep and 200 feet in diameter. The average fall of Spring River is three and three-tenths feet per mile. The natural power is equal to 10,000 horsepower in the first seven miles. The advent of the Kansas City, Springfield, and Memphis Railroad was followed by the partial improvement of Mammoth Spring, and the utilization of water power. The fact that Mammoth Spring ws remote from a railroad until the past few years accounts for the lack of development. But once the railroad connection was made, some Memphis capitalists saw the advantages of the fine water power and purchased it. The company was chartered under the name of the "Mammoth Spring Water Power and Improvement Company," and the improvements which subsequently followed have been the results largely of the investments of this company. It was organized in June, 1887, with a paid up capital of $200,000.

The first work of the company was to construct a massive dam across what might be called the mouth of outlet of the spring at a cost of $30,000, thus securing a fourteen-foot head of water with 1,000 horsepower. The dam is 107 feet long and has two delivery gates capable of discharging 90,000 cubic feet of water per minute, for draining the reservoir.

The large cotton factory and grain mill, whose machinery is now propelled by this dam, only consume 250 horse-power of the supply offered, leaving a surplus of 750 horse-power. The economy of water power may be estimated as follows:

- Saving the boiler, engine and other expensive machinery
- Saving the salary of engineer and fireman

- Saving the cost of fuel.

The Roller Mill is (was) a four story, brick building equipped with the finest machinery has a capacity of 300 barrels of flour and 200 barrels of meal per day, and the cost of power to turn out its output is onlye once cent a barrel. The Calumet Cotton Factory is (was) a two-story brick building 300 feet long, equipped with 3,000 spindles, 122 looms, and a dye house and picker. The looms have a capacity of 6,000 yards of gingham, worth 10 cents a yard, is $66. The factory has been shut down for several months on account of some dissatisfaction among the stockholders, which resulted in the recent sale of the property by decree of the Federal Court. In a short time, however, it will resume operation, and will give employment to about 150 hands.

Next to the big spring, the greatest attraction at Mammoth Spring is the fish farm which propagates fish for release in Spring River. Excavations have been made in a valley near the spring and these are supplied with water from the spring by connecting pipes. The fish are divided off into departments in the various vats like a stock breeder would divide herds in different pastures, and by certain artificial means they can be transferred from one vat to another. The little fish, minnows, are in a small vat to themselves, where they will not be devoured by the large ones, and the others are classified according to page. Each vat is alive with fish, the entire product being trout, except German carp used for feeding the trout. There are thousands of fine trout now just right for the market but they are being held back for spawning purposes.

Kansas City Journal Feb 27, 1898
Charles H. Dold, of the Jacob Dold Packing Company: "I am greatly pleased with the proposition and have manifested my confidence in a substantial manner. There is enough water power provided by the spring to make the city as wonderful as Niagara Falls. There are minerals in abundance in the neighboring hills to furnish the basis for metal manufacturing, while the cotton fields nearby and sheep ranges will undoubtedly furnish ample fields for manufacturing woolen and cotton fabrics."

Memphis Avalanche Sun Feb 23, 1890
Unequalled Water Power in Mammoth Spring, Arkansas
Three years ago Mammoth Spring was a village of three or four straggling houses and a dilapidated grist-mill to which neighboring farmers repaired to have their little bags of corn ground into meal. Soon stories began to come to Memphis of a wonderful spring in Arkansas that gushed out of the foot of a mountain at Mammoth Spring, and after spreading into a broad lake gradually narrowed down into a clear, limpid stream that ran for miles and miles over rocky foundation and at last emptied itself into Black River forty miles from its source. Expert engineers who had visited the stream pronounced it one of the BEST WATER POWERS IN THE WORLD and did not hesitate to say that there was no limit to the extent to which that power might be utilized for manufacturing purposes. But owing to the absence of enterprise and capital, these magnificent natural advantages were not improved, and Mammoth Spring remained undisturbed in its sleep of lethargy, lulled to repose by the murmurous music of Spring River, as it dashed over rocks and pebbles on its way to the South.

But the hour of awakening came at last. One day a gentle-

man, in whose judgment Mr. Napoleon Hill had implicit confidence, happened to mention to him that Mammoth Spring was for sale, and depicted in glowing colors it's wonderful natural advantages for manufacturing purposes. The property embraced 20,000 acres of land with ten miles of water rights along the banks of the Spring River. The price set upon the property was $60,000. Mr. Hill secured an option upon the property and within a week's time Mammoth Spring came into the possession of a stock company composed of Napoleon Hill, John W. Cochran, Sam Tate, Jr., John M Peters, Sol. Coleman, all of Memphis, and J. M. Archer, C. T. Walker and F. M. Daniel of Mammoth Spring. After their return to Memphis the Mammoth Spring Improvement and Water Power Company was permanently organized and the work of improvement begun.

The first step was THE BUILDING OF A DAM near the source of the stream and at the very doors of the town of Mammoth Spring. This piece of masonry is of heavy rock 107 feet wide from pit to pit and assures a water power equivalent to a thousand horse power. Its cost was $80,000 but those interested in the enterprise did not hesitate at cost in view of the rich possibilities in sight for them.

Memphis is to be congratulated upon the prospect of having throughout the spring and summer a supply of trout fresh from the spring and unsurpassed in delicacy of flavor by any in the world. In this connection it is worthwhile mentioning that on the surface of Mammoth Spring grows an inexhaustible quantity of delicious water cress; so abundant is the supply that the inhabitants do not gather it, but leave it for the cows to eat as they wade leisurely through the limpid and translucent water. This water is as clear as crystal, and that celebrated chemist, Charles Smart of the Agricultural Bureau of Washington, pronounces it after careful analysis to be absolutely free from mineral or vegetable matter.

A ride along Spring River in the daytime on board in a Kansas City Railroad train is a delightful experience. For miles and miles the track follows the meanderings of the beautiful stream, now gliding smoothly along without a ripple on its surface, and then suddenly foaming over the crest of a miniature cascade. The river is full of such surprises, and they never fail to delight the eye. Even to those who have no eye to business a trip to Mammoth Spring Ark., will richly

repay the cost and trouble.

The Journal Gazette August 30, 1912
The Mammoth Spring Power Company has in operation 18 miles of 45 foot steel tower transmission lines, 33000 volts and is now building a line to West Plains, 32 miles from Mammoth Spring.

Walks through History Mammoth Spring Dam & Lake

The Mammoth Spring Dam was listed on the National Register of Historic Places in July 2009. Fulton County was established on December 21, 1842, from part of Izard County. Fulton County was named after William Savin Fulton, who was the last territorial governor of Arkansas (1835-36). Early white settlement in the area that would become Mammoth Spring started a few miles north of the Arkansas-Missouri state line in 1818 when Ridley Thomas built a cabin near the Harry Turnstall spring. This area is now called "Old Town" because many people relocated when it became clear that the Kansas City, Fort 2 Scott, and Memphis Railroad would run their lines a few miles to the south through the current location of Mammoth Spring in 1883. However, some people did settle immediately around the Mammoth Spring head beginning in the late 1820s. At that time, Mammoth Spring was referred to as "the Big Spring," and the surrounding area was called "Head of the River."

William Lindley held an unofficial claim on a 40-acre tract that included the springhead, or so he thought. When Lindley sold his unofficial claim to William Allen in 1830, Allen attempted to secure a formal legal title to the land. Much to his dismay, Allen discovered that the section lines running north-south and east-west went directly through the center of Mammoth Spring. Therefore, property disputes arose over the ownership of Mammoth Spring, with as many as four people claiming the actual springhead and even more claiming the outflow of the spring downriver. This ownership dispute continued until the late 1880s when the property was consolidated into a single tract. Meanwhile, the Lindley and Allen families built cabins on a hillside just

to the north of the spring, and Allen constructed the first mill in 1836. This mill did not stimulate commercial development because it was small and intended for the family's private use.

The area known as "Head of the River" slowly began to grow in 1850, when brothers William and Joe Mills constructed a larger grist mill and dam on the spring. The Mills brothers also opened the first store in the region, which was operated by William's father-in-law, Daniel Woolford. The settlement had about 25 residents in the early 1850s, but the population would increase by the end of the decade as a result of a state report promoting the geological resources of the area.

Arkansas's first state geologist, Dr. David Dale Owen, conducted the first official survey of Arkansas's northern counties in 1857. In his report, Dr. Owen referred to "the Big Spring" as "Mammoth Spring" because it was thought to be the world's largest spring (actually the world's 7th largest spring). Owen determined that the source of the Spring River was Mammoth Spring, which was an up swell of water from an extensive system of underground rivers beginning in Missouri.

Mammoth Spring is the largest natural spring in Arkansas and one of the largest springs in the world. Mammoth Spring produces an average of 9.78 million gallons of water per hour at a constant temperature of 58 degrees Fahrenheit. The spring's dependable flow year-round would make it ideal for powering manufacturing industries in the late 19th and early 20th centuries. In 1874 the Deaderick family

purchased the spring and improved the settlement by adding a flour mill and cotton gin to the existing corn mill, and in 1880, J. Smith 3 Deaderick opened a store. By 1881, the Kansas City, Fort Scott, and Memphis Railroad planned to construct its lines through Fulton County as it completed its route between Memphis, TN, and Springfield, MO. Because the Deadericks knew that their village was not prepared to make the transition to a bustling railroad town, J. Smith Deaderick platted the town of Mammoth Spring the same year. The plat was recorded at the county courthouse in Salem in 1883, just in time for the arrival of the railroad.
Napoleon Hill

The year 1886 represented a major turning point in the history of Mammoth Spring. Napoleon Hill, a wealthy investor from Memphis, TN, first arrived in Mammoth Spring in the summer of 1886. Hill was en route to Kansas City when his train stopped briefly in Mammoth Spring. The Kansas City, Fort Scott, and Memphis Railroad Depot in Mammoth Spring (NR-listed 6/11/1992) was completed in 1886, just to the southeast of the Mammoth Spring head. When Hill stepped off the train at the depot on that hot summer day, he felt the cool breeze coming off the 58-degree spring water and never forgot it. Hill returned to Mammoth Spring later that year with a group of wealthy businessmen, and because he realized the potential of harnessing the spring's water power, the group bought the spring and a significant amount of land throughout the town.

The Memphis capitalists formed the Mammoth Spring Improvement and Water Power Company and resurveyed the town to encompass a larger area. These investors also began construction of the town's first substantial brick buildings. Just 6 months after the creation of the improvement company, the population increased to 500, and the town shipped

3,000 bales of cotton and $20,000 in fruits and vegetables. The town also boasted three hotels, a lodge hall, and several boarding houses. Mammoth Spring Dam constructed The Mammoth Spring Improvement and Water Power Company, headed by Napoleon Hill, invested $200,000 in the construction of a dam, flour mill, and cotton mill. The Mammoth Spring Dam was completed in 1888 and powered the Mammoth Spring Roller Mill and Elevator, which ground soft wheat into flour, and the Mammoth Spring Cotton Mill and Cotton Gin (roller mill & cotton mill completed about 1889).

The dam created a 16-acre water reservoir called Spring Lake, and water from Mammoth Spring constantly ran over the top of the dam. The Mammoth Spring Dam was made of cut limestone set in a concrete 4 footing on solid rock. Turbines, which provided power to the mills, were located in 30' x 30' cut limestone turbine wells on each end of the dam; the roller mill was located adjacent to the south turbine well, while the cotton mill was near the north turbine well. The dam measured approximately 198' in length, including the two turbine wells, with a 10' base and a 7' spillway. Three sluice gates were located in each turbine well, and two deep sluice gates were evenly spaced along the spillway.

The Mammoth Spring Dam is a unique intact example of an early stone masonry gravity dam, initially constructed to divert water to power a grist mill and cotton mill and later a hydroelectric power plant. Dams have historically been built for the purpose of either diverting or storing water. Diversion dams typically redirect water for use elsewhere, such as in irrigation channels or toward smaller canals where hydroelectric power can be generated. The Mammoth Spring

Dam powered the grist mill and cotton mill with a system of turbines connected to gear systems, which ran mechanical belt drives that turned a shaft inside each factory that powered the necessary machinery. Following the development of electric generators in the late nineteenth century, the Mammoth Spring Dam was retrofitted with new turbines and a generator in 1927 to generate hydroelectricity. Diversion dams are usually built to allow water to periodically over-top the dam, or in the case of the Mammoth Spring Dam, water is constantly allowed to over-top the dam because the spring constantly replenishes Spring Lake. Gravity dams are those in which "the force of gravity acting on the dam is what provides structural stability." In other words, the construction of a gravity dam is based on using enough construction material to resist the force of the stored water to push it downstream. Early gravity dams were constructed with earth, rock, or timber.

The Mammoth Spring Dam is made of six large limestone slabs, which are stacked on top of each other with the widest slab at the bottom and the thinnest slab at the top, creating a series of steps. Three other nineteenth century stone masonry gravity dams in Arkansas are listed on the National Register of Historic Places—the Osage Mills Dam in Benton County (NR-listed 1/28/1988), the Ruddell Mill Site in Independence County (NR listed 8/28/2007), and the Spring Mill in Independence County (NR-listed 3/1/1974). However, these dams are much smaller in scale than the Mammoth Spring Dam, and the bodies of water controlled by the dams cannot compare to the volume of water produced by Mammoth Spring and Spring Lake.

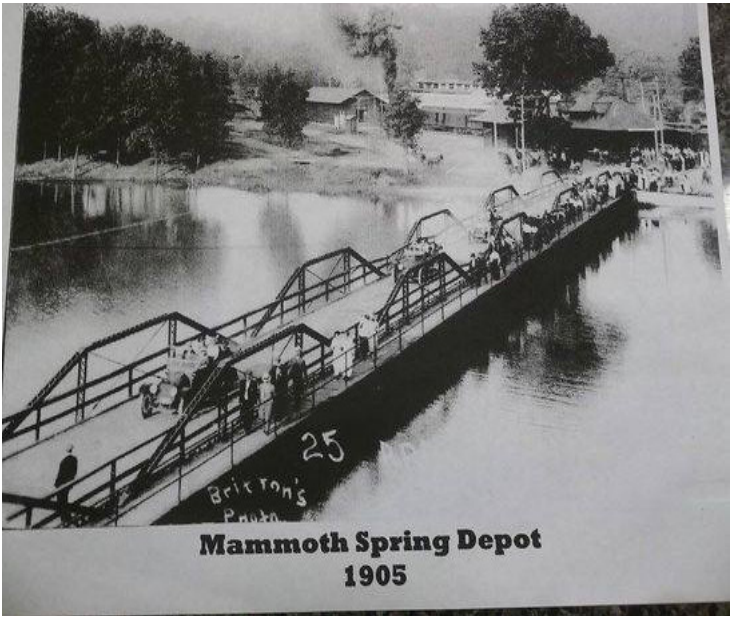
In addition, the Mammoth Spring Dam is unique because it was later converted into a hydroelectric power plant and

provided electricity to a sizeable population. For these reasons, the Mammoth Spring Dam and Spring Lake have statewide significance. The construction of the Mammoth Spring Dam, Roller Mill, and Cotton Mill spurred additional commercial and industrial development in the area, which ultimately led to the settlement formerly known as "Head of the River" adopting the name Dr. Owen had given the spring in 1857—Mammoth Spring. The city of Mammoth Spring incorporated on June 15, 1889, and enjoyed a booming economy based on industry and tourism from the 1880s until the 1920s.

By March 1897, Mammoth Spring had a population of 950 and various amenities in addition to the cotton mill, gin, and roller mill, such as an opera house, three hotels, numerous boarding houses, groceries, banks, hardware/furniture stores, dry goods stores, millineries, and a lumber yard. The Mammoth Spring Roller Mill and Elevator, which consisted of a 4-story brick Second Empire-style building, a large grain elevator, and two warehouses, operated successfully for many years. It was destroyed by fire in the late 1920s. The Mammoth Spring Cotton Mill and Cotton Gin was a large-scale operation and the city's largest employer in 1889; it included a 2-story brick building with 132 looms as well as a gin and several ancillary structures. The cotton mill ran for at least six years before "antiquated machinery" forced it to close. The mill building remained vacant until 1906 when the Arkansas Shoe Manufacturing Company leased it and began operations in July 1907. Financial difficulties caused the shoe factory to close after only six months. The building remained vacant for a period, but by 1914, the brick cotton mill building was used as an electrical supply and repair shop and the Planter's Gin Company moved into the old gin building. These buildings were demolished sometime after

1926.

Only the Mammoth Spring Dam remains as evidence of the town's industrialization. Tourist destination In addition to providing power for the factories, the Mammoth Spring Dam created Spring Lake and became a popular tourist destination itself, with visitors often having their photo taken



on or near the dam.

After the railroad's completion in 1883, people traveled to Mammoth Spring to witness the spring's impressive flow and enjoy the cool breezes coming off the 58-degree water. The Nettleton Hotel was completed in 1889, followed shortly by the Culp Hotel and the Charlton Hotel, providing upscale accommodations for tourists. Just as Arkansas cities

like Hot Springs (Garland County), Eureka Springs (Carroll County), and Heber Springs (Cleburne County) attracted people by touting the curative powers of their natural spring water, Mammoth Spring "profited from the health crazes of the late 6 nineteenth century, which recommended bathing in hot natural springs as a cure for a host of physical ailments."

Napoleon Hill and his business associates heavily promoted Mammoth Spring as a resort town, and Mammoth Spring soon became the summer destination of choice for wealthy Memphians and residents of the Arkansas Delta. A circa 1934 pamphlet entitled "Mammoth Spring in the North Arkansas Ozarks Invites You Here, Where the Spring Pours from the Earth" advertised the Spring Beach Playground on Spring Lake, which was "equipped with amusements of various kinds, including a high-powered motor boat, row boats, cheered to accommodate 30 to 40 kiddies, spring boards, dressing rooms with lockers for women and girls, men and boys, [and] a band stand out in the water where regular concerts make merry the surrounding." In addition, the pamphlet advertised Baertel's Log Cabin Tourist Camp, which was a group of 12 log cabins located on the west bank of the Spring River within sight distance of the spring. These cabins were equipped with the most modern conveniences, including running water, electric lights and fans, dishes, bedding, and showers. The advertisement invited tourists to spend time near "the most beautiful stream in America," where they could enjoy free shower baths, free swimming, free boats, good fishing, and a nearby golf course.

Mammoth Spring Fish Hatchery

The constant flow of cool water from Mammoth Spring and

a close proximity to the railroad also made the area attractive to the United States Fish and Wildlife Service. They established the Mammoth Spring National Fish Hatchery in 1903 adjacent to the Roller Mill and Elevator. The fish hatchery obtains water directly from Spring Lake, drawing a constant flow of 3,500 gallons per minute. The reliable water supply allows the hatchery to raise a wide variety of fish. The hatchery stocked rivers and national wildlife refuges, including the Spring River and its tributaries, which added to the town's appeal as a tourist destination. The hatchery continues to operate in the same location and works to restore populations of endangered fish and aquatic species.

MAMMOTH SPRING, Ark. (KTHV) – In the foothills of the Ozarks, the Spring River flows through a tiny town with a sizable industry. Mammoth Spring is a place rich with conservation and home to one of the country's oldest fish hatcheries.

"Trout fishing is a big business here in Arkansas," explained Melissa Jones hatchery manager with Arkansas Game and Fish. She's worked at the hatchery for more than 30 years. Fifty percent of all the rainbow trout stocked in Arkansas is raised in Mammoth Spring—that's one million fish a year. "You go out, and you catch fish, and you really don't put a lot of thought into how do these fish get here?" Jones said. "From the time that we get an egg until its 11-inch stocker size, it takes about 14 to 15 months. So, a lot of time is invested in that fish even before it is available for anglers to catch."

At least two truckloads are distributed across Arkansas every day. On this day, the Spring River got stocked with 500

trout. The trout is also taken to Bull Shoals, Greers Ferry Lake and 26 community sites, like MacArthur Park in Little Rock.

"It is 365 days a year. Today it is raining. We work in rain, sleet, snow, in the heat. It is a full time job," added Jones. Using Mammoth Springs as its water source, the hatchery is among a handful in the world that uses in-ground silos to raise fish. They can hold triple the amount that your common rectangular raceway can hold. There's about 15,000 fish in each silo. They're given trout feed that's high in protein three times a day.

To keep things running smoothly, netting covers the hatchery to keep blue herons away. It was replaced last year after an ice storm in 2009 damaged it. Hundreds of thousands of fish were lost.

As for the economic impact, the hatchery provides millions of dollars every year not just for the local economy but statewide. "It certainly is something for all Arkansans to be proud of," Jones concluded.

Bridge across Lake:

In order to provide access from downtown Mammoth Spring to the railroad depot, a wooden bridge (later replaced by a steel frame bridge) was constructed across Spring Lake. It was privately owned and was sold for scrap metal in the 1960s. You can still see the bridge abutment and a picture of how the bridge appeared.

The Arkansas-Missouri Power Company (Ark-Mo)

The Arkansas-Missouri Power Company purchased the Mammoth Spring Dam in 1925 and converted it into a hydroelectric power plant. In 1927, the south turbine well was retrofitted with a new turbine and generator to provide electrical power, and a stone masonry powerhouse was constructed atop the south turbine well to house the equipment. The north turbine well was capped with a concrete slab at that time; however, the well still contains the original turbine and retains its three sluice gates. When the powerhouse started generating electricity in 1927, Mammoth Spring became the first town in the area to have electricity. The Mammoth Spring Dam powerhouse had an average annual net generation of 2,128,875 kilowatt-hours, eventually providing electricity to Mammoth Spring, AR, as well as Thayer, Koshkonong, Brandsville, and West Plains, MO. The Arkansas-Missouri Power Company operated the hydroelectric power plant until 1972, when it donated the plant to Arkansas State Parks. See Ark-Mo Powerhouse (restored in 1993), which shows how the dam generated electricity—turbines and generator. Powerhouse has grapevine mortar.

Milling Company Vault

All that remains of the Mammoth Spring Milling Company is this concrete structure. It served as the company's vault, where they kept important documents and records. The company's safe and time clock are on display in the depot museum.

Culp Hotel, Mammoth Spring, Arkansas
60789-C

Mammoth Spring State Park

The Mammoth Spring State Park was established by an act of the Arkansas State Legislature in 1957, but the first land was not acquired until 1966. The abandoned Kansas City, Fort Scott, and Memphis Railroad Depot was leased to the park in 1968, and most of the land purchases were completed by 1975. Mammoth Spring State Park now encompasses a 62-acre tract of land, including the Mammoth Spring head; Spring Lake; the Mammoth Spring Dam and powerhouse; the Queen Anne-style Kansas City, Fort Scott, and Memphis Railroad Depot (1886); a Tourist Information Center; playground; picnic area; interpretive walking trail; and baseball field. 8 Depot Built in 1886 as the Kansas City, Fort Scott, and Memphis RR Depot. Later the St. Louis & San Francisco or Frisco Depot. Influenced by the Queen Anne style of architecture with its steeply pitched dormer windows covered in decorative shingles. The railroad depot was completely restored as a museum in 1999. Also see a restored 1947 Frisco caboose.

Springhead

Spring Lake was originally around 16 acres in size, but it has been reduced to about 9.5 acres. A weigh station was to be constructed near the springhead in 1972 just to the east of U.S. Hwy. 63, so the western portion of Spring Lake was filled with dirt to create enough space for it. The weigh station was never built, but the volume of Spring Lake was reduced. In addition, an island was built in the middle of the lake in the mid-1970s and a concrete cap was removed from the top of the dam, which further reduced the size of the lake. Even when the lake was larger, the power plant could only operate for 30 minutes out of every hour before it had

to shut down and let the lake refill. After Spring Lake was considerably reduced in size, feasibility studies conducted in the 1980s and 1990s predicted that the powerhouse could only operate for 15 minutes out of every hour before stopping to let the lake refill. Therefore, the decision was made not to put the powerhouse back into operation.

Conclusion

When the St. Louis and San Francisco Railroad (now the Burlington Northern Santa Fe Railroad) stopped passenger service in 1968, Mammoth Spring became a relatively quiet community. However, a considerable amount of vehicular traffic still passes through the middle of Mammoth Spring since Hwy. 63 is the main route between Memphis, TN, and Springfield, MO. The City of Mammoth Spring still relies on the waters that gave it life in the late 1800s. Around 300,000 people visited Mammoth Spring State Park in 2008, and the Spring River is very popular among canoeists/kayakers and fishermen because of its reliable flow year-round.

Ancient History of the origin of Mammoth Spring Lake

The first description of Grand Gulf and Mammoth Spring with its ancient history, appeared in the Kansas City Star of November 3, 1907 and was written by Will H. Zorn of West Plains:

Students of history are satisfied to believe that DeSoto, in his wild and fatal expedition in search of gold and the "Tabled Fountain" was the first white man to visit Mammoth Spring, that wonderful and natural fountain in northern Arkansas. In 1693, one hundred and thirty two years after DeSoto's visit, Marquette and Joliet were among the same hills, then treeless and covered in prairie grass, and drew

a crude map of the country. La Salle spent some time at a Quapaw village on the Arkansas river in 162 and took possession of the whole country in the name of Louis XIV of France. The country was tossed about like a shuttlecock for another century or more between France and Spain, neither knowing what to do with their new world possession. Finally it was sold to the United States and it began to settle up chiefly with Tennesseeans. A half century more passed away and then the human and brute denizens of the silent Ozark hills and quiet valleys were startled and stampeded by the shrill whistle of locomotive engines.

This is the modern history of a land that, some archaeologists assert, it has proven can rightly claim an antiquity so great the sphinx and Egyptian pyramids seem young by comparison.

This, they say, is the ancient land of Uz. Just north of Mammoth Spring, in a beautiful valley lying in Missouri, once stood the wide spreading manor house of Job, "a perfect and upright man, who loved God and eschewed evil; there was no other like him in all the world."

Further north, upon the windswept crest of the Ozarks, stood the hospitable mansion of Job's eldest son, doomed to destruction by the first cyclone recorded in ancient history. About 3,000 years after Job had recovered from his afflictions and regained his prosperity this land of Uz became populated by a people possessing a civilization far in advance of the warlike and savage Indians who covered or controlled most of the North American continent. The Uzrians or of the Nodites had cultivated fields, orchards and gardens, kept herds of stock, and were not nomadic.

These people of mysterious origin, called "Nod-Uzzers"

in memory of ancient Nod and Uz, are said to have extended their settlements over much of the territory now embraced within the counties of Howell and Oregon in Missouri and Fulton, Sharp and Izard in Arkansas. Their two largest villages were located at Mammoth Spring and Grand Gulf.

Here is the story of their two great natural wonders and the people who once inhabited them as told by archaeologists:

An immense underground lake at Grand Gulf was at the time connected with Mammoth Spring by a navigable underground river. This river was the chief avenue of communication between the two villages, and when visits of high ceremony were to be made or when important social functions drew large crowds from one village to the other this subterranean river was illuminated along its entire distance of eight miles.

There is no record of the length of time the Nod-Uzzers were permitted to enjoy their romantic environment and the fruits of their labors, but when long years of uninterrupted peace and ease had softened the muscles of their braves and dulled their alertness to danger, they were suddenly attacked by a powerful band of warlike savages from the North who came upon them without warning and mercy. It was not a battle, but a massacre. Village after village was destroyed and except Grand Gulf, it was a war of utter extermination. At Grand Gulf several hundred people mostly women and children, escaped immediate death by taking refuge in the subterranean lake and river.

Here they remained for a time in safety, but when the work of butchery and ruin was complete, a dam was built that turned the tunnel into a lake where the people were drowned or forced to come out where they were captured and killed. Only a few of the tribe escaped and they carved in ancient hieroglyphics a history of the great conflict on the tablets archaeologists have been able to read.

On a copper tube, tempered to the hardness of Damascus steel by an art long since lost, portions of the history were written, and a farmer of Oregon county found this ancient treasure in his field. Near Vinita, Okla., a stone tablet was found by a searcher and more of the war was learned. Then the connecting link to firmly prove that this region is truly the former home of the Non-Uzzers was gleaned from the mute, but unimpeachable "testimony of the rocks" of the hieroglyphics of the high bluffs along Lake Super.

Attempts of late years to explore the underground stream connecting Grand Gulf and Mammoth Spring have proved futile. Twenty years ago two men from West Plains carried a boat through the long canyon to the mouth of Grand Gulf and dragged the craft amid the glistening stalagmites to the underground river explorers. Looking ahead they saw that the waters touched the roof of the cavern and further passage

was impossible. As proof of their journey they exhibited an ancient earthen jug found in the cavern where they had landed. Archaeologists who have examined the jug declare it is over 3,000 years old. Scientists who recently visited the place contemplate making a journey to Mammoth Spring in a subterranean boat. That the stream really comes to the surface at Mammoth Spring has been proven by scattering sacks of oats in water at Grand Gulf. Men in boats afterwards picked up the grain on the surface of the waters of Mammoth Spring where the great artesian fountain rushes up from its cavernous depths.

The march of modern civilization has displaced the Indians and even the "hillbillies" are giving way to Eastern and Northern people who have built dams across Mammoth Spring and are using the power to operate mills and factories. In the meantime the dark lake still sleeps beneath the mountain the subterranean channel still pours out its mighty flood into Mammoth Spring and Spring River sings a ceaseless requiem to those who lived upon its banks and died in the mysterious labrynths of its underground channels.

The End